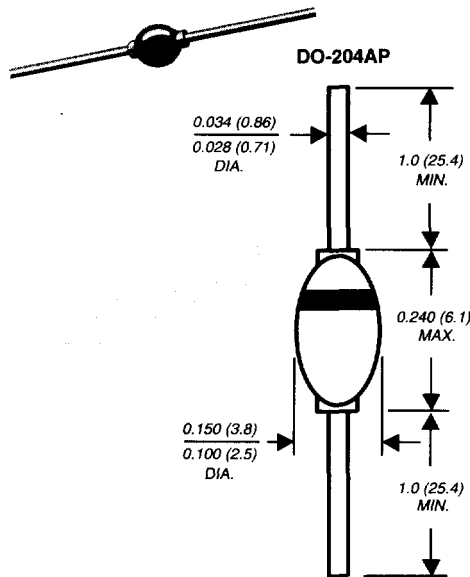


BYV27-50 thru BYV27-200

Glass Passivated Ultrafast Rectifier

Reverse Voltage 50 to 200V

Forward Current 2.0A



Dimensions in inches and (millimeters)

* Brazed-lead assembly is covered by Patent No. 3,930,306

Features

- High temperature metallurgically bonded construction
- Cavity-free glass passivated junction
- Ultrafast recovery time for high efficiency
- Low forward voltage, high current capability
- Capable of meeting environmental standards of MIL-S-19500
- Hermetically sealed package
- Low leakage current
- High surge current capability
- Specified reverse surge capability
- High temperature soldering guaranteed:
350°C/10 seconds, 0.375" (9.5mm) lead length,
5 lbs. (2.3kg) tension

Mechanical Data

Case: JEDEC DO-204AP, solid glass body

Terminals: Plated axial leads, solderable per MIL-STD-750, Method D2026

Polarity: Color band denotes cathode end

Mounting Position: Any

Weight: 0.02 ounce, 0.56 gram

Maximum Ratings & Thermal Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

	SYMBOLS	BYV27-50	BYV27-100	BYV27-150	BYV27-200	UNITS
Maximum repetitive peak reverse voltage	V _{RRM}	50	100	150	200	V
Maximum RMS voltage	V _{RMS}	35	70	105	140	V
Maximum DC blocking voltage	V _{DC}	50	100	150	200	V
Maximum average forward rectified current 0.375" (9.5mm) lead length at T _L =85°C	I _{F(AV)}	2.0				A
Peak forward surge current 10ms single half sine-wave superimposed on rated load at T _J =175°C	I _{FSM}	50				A
Typical thermal resistance (NOTE 1, 2)	R _{θJA} R _{θJL}	65 20				°C/W
Operating junction and storage temperature range	T _J , T _{STG}	-65 to +175				°C

Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

	SYMBOLS	BYV27-50	BYV27-100	BYV27-150	BYV27-200	UNITS
Minimum reverse breakdown voltage at 100 μA	V _{BR}	55	110	165	220	V
Maximum instantaneous forward voltage at 3.0A T _J =25°C T _J =175°C	V _F	1.07 0.88				V
Maximum DC reverse current at rated DC blocking voltage T _A =25°C T _A =165°C	I _R	1.0 150				μA
Maximum reverse recovery time at I _F =0.5A, I _R =1.0A, I _{rr} =0.25A	t _{rr}	25				ns
Typical junction capacitance at 4.0V, 1MHz	C _J	45				pF

NOTES:

- (1) Thermal resistance from junction to lead at 0.375" (9.5mm) lead length with both leads attached to heatsink
- (2) Thermal resistance from junction to ambient at 0.375" (9.5mm) lead length, mounted on P.C.B. with 0.5 x 0.5" (12 x 12mm) copper pads

Ratings and Characteristic Curves (T_A = 25°C unless otherwise noted)

FIG. 1 - MAXIMUM FORWARD CURRENT DERATING CURVE

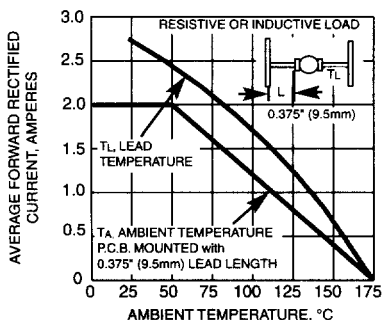


FIG. 2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

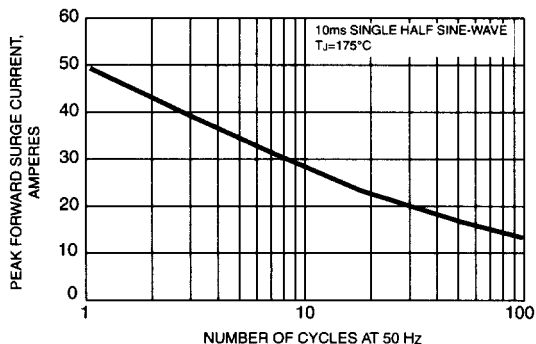


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

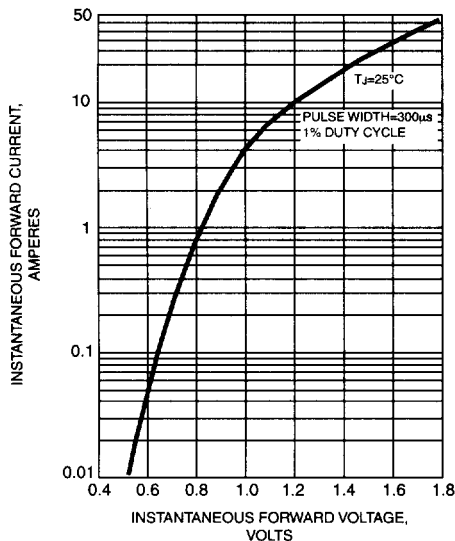


FIG. 4 - TYPICAL REVERSE LEAKAGE CHARACTERISTICS

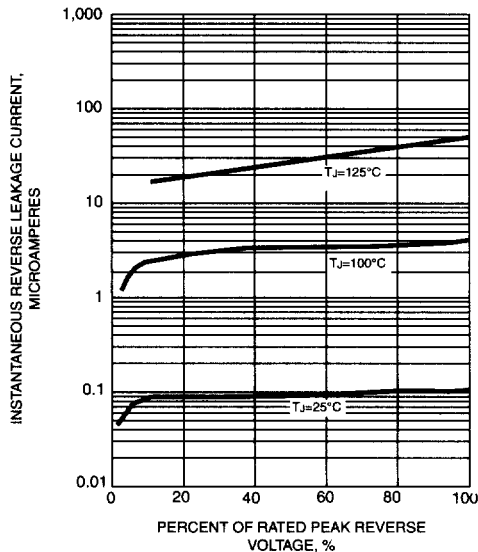
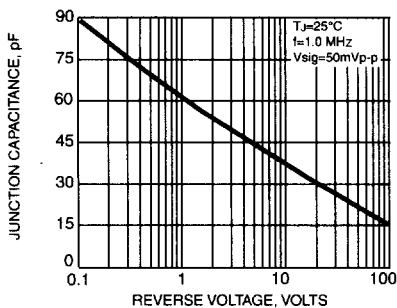


FIG. 5 - TYPICAL JUNCTION CAPACITANCE



Ultrafast Recovery